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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,540	05/04/2006	Leon Axel	35836/US/2-475396-00176	9473

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DORSEY & WHITNEY LLP
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250 PARK AVENUE
NEW YORK, NY 10177

EXAMINER

GLENN, KIMBERLY E

ART UNIT	PAPER NUMBER
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2817

MAIL DATE	DELIVERY MODE
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08/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,540	Applicant(s) AXEL, LEON	
	Examiner Kimberly E. Glenn	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 6,12,18,42-44 and 47 is/are allowed.
- 6) ☒ Claim(s) 1-4,7-10,13-16,19,20 and 22 is/are rejected.
- 7) ☒ Claim(s) 5 11 17 21 23-41 45 46 48-53 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

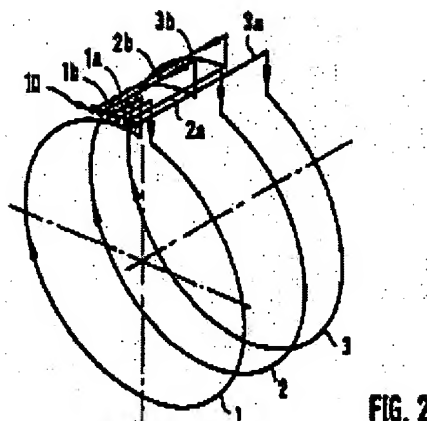
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7-10, 13-16 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Arz et al US Patent 6,515,479. (Of record)

Arz et al disclose a switchable longitudinal gradient coil for magnetic resonance imaging systems comprising a first conductive member 1a; and a second conductive member 1 electrically coupled to the first conductive member, 1a wherein the second conductive member forms a segment that has an approximate shape of an arc when viewed along a direction of extension of the first conductive member, and wherein the first and second conductive members form at least one magnetic field gradient coil structure. The gradient coil further comprises a third conductive member 1b, which is positioned approximately parallel to the first conductive member 1a, and which is electrically coupled to the second conductive member 1. The first, second and third conductive members form at least one magnetic field gradient coil structure. The first conductive member is capable of receiving an electrical current. The coil structure generates one gradient field. The first conductive member 1a to receive an electrical current, the second conductive member 1 pass the electrical current and permits the electrical current to exit through the third conductive member 1b.



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sepponen US Patent 4,626,784 in view of Arz et al US Patent 6,515,479 (of record).

Sepponen disclose a NMR imaging device comprising a gradient coil 3 and a processor 13 to which the operator supplies imaging parameters by means of a terminal 14. The imaging result is shown on a video display 15. The processor also controls a gradient current source 16 of the assembly for feeding to the set of gradient coils 3 the currents required for generating the gradient fields.

Thus, Sepponen is shown to teach all the limitations of the claims with the exception of a set of instructions operable to direct a processor to perform the steps of: permitting the first conductive member to receive an electrical current, permitting the

second conductive member to pass the electrical current there through, and permitting the electrical current to exit through the third conductive member.

Arz et al disclose a switchable longitudinal gradient coil for magnetic resonance imaging systems comprising a first conductive member 1a; and a second conductive member 1 electrically coupled to the first conductive member, 1a wherein the second conductive member forms a segment that has an approximate shape of an arc when viewed along a direction of extension of the first conductive member, and wherein the first and second conductive members form at least one magnetic field gradient coil structure. The gradient coil further comprises a third conductive member 1b, which is positioned approximately parallel to the first conductive member 1a, and which is electrically coupled to the second conductive member 1. The first conductive member 1a to receive an electrical current, the second conductive member 1 pass the electrical current and permits the electrical current to exit through the third conductive member 1b.

One of ordinary skill in the art would have replaced the gradient coil 3 of Sepponen with the gradient coil as taught by Arz et al.

The motivation for this modification would have been to provide a gradient coil that allows a versatile changing of the magnetic field generated with the coil, which achieves a better adaptation to the required imaging conditions without physically re-orienting the coil.

Allowable Subject Matter

Claims 5,11,17,21, 23-41, 45, 46 and 48-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 6, 12, 18, 42-44 and 47 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: With regards to claims 6,12, 18, 36-44 and 47- 51,the prior art of record does not disclose or fairly teach a switch configured to dynamically control an offset between the first and second conductive members.

With regard to claims 5, 11, 17, 21, 52 and 53, the prior art of record does not disclose or fairly teach first conductive member is offset axially from the second conductive member.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2817

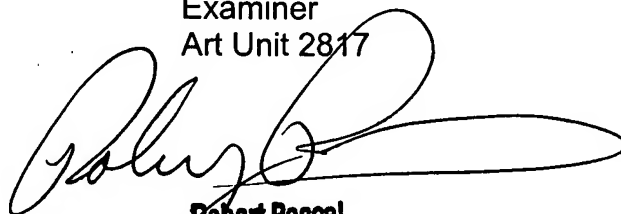
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E. Glenn whose telephone number is (571)-272-1761. The examiner can normally be reached on Monday-Friday 7:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571)-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly E Glenn
Examiner
Art Unit 2817

A large, stylized handwritten signature in black ink, likely belonging to Robert Pascal, is written over the printed name and title.

Robert Pascal
Supervisory Patent Examiner
Technology Center 2800

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